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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/616,480	07/14/2000	Thomas A. Dye	5143-01801	6329

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EXAMINER
WILLIAMS, HOWARD L

ART UNIT	PAPER NUMBER
2819	

DATE MAILED: 08/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

CH

Office Action Summary	Application No.	Applicant(s)	
	09/618,480	Dye et al	
	Examiner	Art Unit	
	Howard Williams	2819	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *three* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☑ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☑ Claim(s) *1-61* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6) ☑ Claim(s) *17-61* is/are rejected.

7) ☑ Claim(s) *1-16* is/are objected to.

8)☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☑ Notice of References Cited (PTO-892)
16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17) ☑ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
18) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
19) ☐ Notice of Informal Patent Application (PTO-152)
20) ☐ Other: .

A shortened statutory period for reply to this action is set to expire THREE MONTHS from the mailing date of this action. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

The examiner acknowledges receipt of the Information Disclosure Statements filed 22 February 2001 and 11 June 2003. Copies of the initialed citation forms should accompany this letter.

The number of claims submitted is considered excessive.

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claims 39-42 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 82-85 of prior U.S. Patent No. 6,208,273. This is a double patenting rejection.

Claims 43-46 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 98-101 of prior U.S. Patent No. 6,208,273. This is a double patenting rejection.

Claims 47-54 provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 103-110 of copending Application No.

09/491,343. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 55, 57, 60 and 61 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 111 and 112 of copending Application No. 09/491,343. Although the conflicting claims are not identical, they are not patentably distinct from each other because they differ only by which board the compression/decompression engines are mounted either the memory module board or the memory controller board.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 17-33 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 9-24 of U.S. Patent No. 6,208,273 B1 in view of Yabe et al. article Compression/Decompression DRAM for Unified Memory Systems: a 16 Mb,

200MHz, 90% to 50% Graphics-Bandwidth Reduction Prototype. These claims add the already patented compression algorithm to the memory board. A feature which is at least partially covered by the patented claims. Comparison with claim 82 of the patent is also notable too.

Claims 1 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. These two claims mix themselves as method and apparatus throughout to the point that one can not be sure what applicant regards as the invention. Additionally the inclusion of recitations to devices external, i.e. device initiating a write of data, to the subject matter clouds the subject matter.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> *A person shall be entitled to a patent unless –*
> *(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.*

Claims 34,36 and 37 are rejected under 35 U.S.C. 102(b) as anticipated by Yabe et al. article Compression/Decompression DRAM for Unified Memory Systems: a 16 Mb, 200MHz, 90% to 50% Graphics-Bandwidth Reduction Prototype. Yabe et al. disclose compression and decompression (fig. 2a) as part of a logic unit embedded with the DRAM units (Fig. 1). Also depicted from figure 1 is the CPU, and memory/graphics controller connected by the buses *Command Link* and *Data Link*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 17-28, 30, 35, 55, 56, 58 and 59 are rejected under 35 U.S.C. 103(a) as unpatentable over Yabe et al. article Compression/Decompression DRAM for Unified Memory Systems: a 16 Mb, 200MHz, 90% to 50% Graphics-Bandwidth Reduction Prototype in view of Masenas (US 5,771,011). Yabe et al., as noted above, disclose compression-decompression mounted with the DRAM units. Yabe et al. show the microprocessor and memory controller (fig. 1) The compression is described as using a lossless algorithm (col. 1, page 342) but does not discloses using a history table and comparing symbols against the contents of the history table in a parallel fashion. Masenas discloses a LZ1 plural byte per cycle compression using a history buffer/table implemented with a content addressable memory. The CAM provides plural comparisons to determine potential matches along various possible match trajectories. The combination of Masenas and Yabe et al. would have been obvious to provide an improved usage of memory and reduced memory requirement achieved through the use of compression.

Claims 1-16 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kjelso discloses a main memory hardware compressor using a CAM based history window. Shimomura et al. (US 6,333,745 B1)

discloses compression/decompression embedded in a memory/display interface controller (fig. 28).

Any inquiry concerning this communication should be directed to Howard L. Williams at telephone number 703-308-1679.

8/8/03

Howard L. Williams
Primary Examiner
Art Unit 2819